ABSTRACT OF THE DISCLOSURE

A system is provided for finding the result of a binary
operation performed on an array of values, along with its
address, in a storage-efficient manner. The system is based on

5   a binary tree structure having a pipeline of binary operators
and corresponding multiplexers and storage elements to store
the outputs of the multiplexers in addition to the partial
addresses of the outputs represented by the outputs of the
binary operators. Each computation stage adds one more bit of

10   address until the address is completely known at the last
computation stage. The invention reduces the amount of storage
required for keeping track of the addresses that are the result
of the binary operation.